

IN THE CLAIMS

Please amend the claims as follows.

✓ Claims 1-68 (Canceled)

69. (Currently Amended) A method of remotely configuring communication apparatus for communication over a network to access ~~a service~~ at least one service system, the method comprising:

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- connecting said communication apparatus to said network;
- automatically configuring said communication apparatus for communication using initial configuration data stored in said communication apparatus;
- said communication apparatus automatically communicating with a remote configuration system over said network using the stored initial configuration data;
- said communication apparatus transmitting unique identification information to said configuration system;
- at said configuration system determining configuration data for said communication apparatus dependent upon the unique identification information, ~~and~~ and transmitting said configuration data to said communication apparatus;
- storing said configuration data received from said configuration system in said communication apparatus;
- controlling subsequent communications by said communication apparatus over said network to access a said service system using the stored configuration data;
- transmitting subsequent configuration data to said communication apparatus automatically from said configuration system;
- storing said subsequent configuration data in said communication apparatus; and
- controlling subsequent communications by said communication apparatus over said network to access a said service system in accordance with the stored subsequent configuration data.

70. (Previously Presented) A method according to claim 69, including the steps of a user of said communication apparatus generating a request for further subsequent configuration data, and transmitting said request to said configuration system to initiate the transmission of subsequent configuration data.

C1 71. (Previously Presented) A method according to claim 69, wherein said configuration data is transmitted over said network using a permanently open control channel associated with a plurality of data/voice channels.

72. (Currently Amended) A method according to claim 69, including the steps at said communication apparatus, of:

gathering information on the use of said at least one service system;  
processing said information to generate summary information; and  
periodically transmitting said summary information to a ~~provider of said~~ management system.

73. (Previously Presented) A method according to claim 72, wherein said information is gathered in real time using a real time clock.

74. (Previously Presented) A method according to claim 72, including the step of supplying said information and/or said summary information to a user.

75. (Currently Amended) Communication apparatus for interfacing a computer system to a communication network to access at least one a-service service system, the apparatus comprising:

first I/O for connection to said computer system;  
second I/O for connection to the communication network;  
a storage for storing unique identification information and configuration data for configuring the operation of the apparatus to access said at least one service system over said communication network;

a processor for controlling said second I/O the first time said second I/O is connected to said communication network to connect to a remote configuration system and to transmit said unique identification information in said storage means to the configuration system;

wherein said processor is operable to control said second I/O to initially receive configuration data from said configuration system, to store said initially received configuration data in said storage, and to control access to a said service system by said computer system in accordance with said initially received configuration data; and

C/ wherein said processor processing means is operable to control said second I/O means to receive subsequent configuration data automatically generated by said configuration system, to store said subsequent configuration data in said storage, and to control subsequent access to said service system by said computer system in accordance with said subsequent configuration data.

76. (Previously Presented) Communication apparatus according to claim 75, wherein said first I/O comprises a local area network port for connection to a local area network.

77. (Previously Presented ) Communication apparatus according to claim 75, wherein said second I/O comprises an ISDN port for connection to one or more ISDN lines in said communications network.

78. (Previously Presented ) Communication apparatus according to claim 77, wherein said second I/O is adapted for connection to an ISDN line having a data channel (D) and a plurality of bearer channels (B ).

79. (Previously Presented ) Communication apparatus according to claim 77, including at least one plain old telephone services (POTS) interface for connecting a telephone to the or each ISDN line.

80. (Previously Presented ) Communication apparatus according to claim 75, including a user interface for allowing a user to generate a request for further subsequent configuration data, said processor being responsive to said request to control said second I/O to transmit said request

to said configuration system to cause further subsequent configuration data to be transmitted to said apparatus.

81. (Previously Presented ) Communication apparatus according to claim 75, wherein said second I/O comprises an ISDN interface for connection to one or more ISDN lines of an ISDN network having one or more channels permanently connecting said ISDN interface to the ISDN network, and for receiving said subsequent configuration data using said data channel.

82. (Previously Presented ) Communication apparatus according to claim 81, wherein said ISDN interface is adapted to receive said subsequent configuration data using one or more communication channels of the or each ISDN line.

83. (Previously Presented ) Communication apparatus according to claim 75, wherein said second I/O is adapted for connection to a dedicated data communication line.

84. (Currently Amended) Communication apparatus according to claim 75, wherein said processor is operable to gather information on the use of said at least one service server by said computer system, to process said information to generate summary information, and to control said second I/O to periodically transmit said summary information to a ~~provider of said~~ service management service.

85. (Currently Amended) Communication apparatus according to claim 84, including real time clock, wherein said processor is operable to use said real time clock to gather real time information on the use of said at least one service server by said computer system.

86. (Previously Presented ) Communication apparatus according to claim 84, including user interface to allow a user of said communication apparatus access to said information.

87. (Currently Amended) Communication apparatus according to claim 86, wherein said user interface comprises a further I/O ~~means~~.

88. (Previously Presented ) Communication apparatus according to claim 86, wherein said user interface comprises a computer program running on said processor to allow a user of said computer system access to said summary information via said first I/O.

89. (Previously Presented ) Communication apparatus according to claim 88, wherein said user interface comprises said processor operating as a web server.

90. (Previously Presented ) Communication apparatus according to claim 89, wherein said processor is operable to gather and process said information using machine independent instructions for output to said user.

91. (Previously Presented ) Communication apparatus according to claim 75, including an encoder for encoding said unique identification information before transmission by said second I/O.

92. (Previously Presented ) Communication apparatus according to claim 75, including a decoder for decoding said initial and subsequent configuration data received in encoded form by said second I/O.

93. (Previously Presented ) Communication apparatus according to claim 75, wherein said second I/O includes a modem for connection to an analogue telephone line.

94. (Currently Amended) Communication apparatus for communicating with a remote system over a network to access at least one service server, the apparatus comprising:  
an I/O for connection to the network;  
a storage for storing unique identification information and configuration data for the operation of the communication apparatus to access said at least one service system;

a processor for controlling said I/O in accordance with said configuration data the first time said I/O is connected to said network to connect to a remote configuration system and to transmit said unique identification information thereto;

wherein said processor is operable to control said I/O to initially receive configuration data from said configuration system, to store said initially received configuration data in said storage, and to control access to a said service system in accordance with said initially received configuration data; and

wherein said processor is operable to control said I/O to receive subsequent configuration data automatically generated by said configuration system, to store said subsequent configuration data in said storage, and to control subsequent access to a said service system in accordance with said subsequent configuration data.

95. (Previously Presented ) Communication apparatus according to claim 94, including an interface means for allowing a user to generate a request for further subsequent configuration data, said processor being responsive to said request to control said I/O to transmit said request to said configuration system to cause further subsequent configuration data to be transmitted to said apparatus.

96. (Previously Presented ) Communication apparatus according to claim 94, wherein said I/O comprises an ISDN interface for connection to one or more ISDN lines of an ISDN network having one or more data channels permanently connecting said ISDN interface to the ISDN network, and for receiving said subsequent configuration data using said data channel.

97. (Previously Presented ) Communication apparatus according to claim 96, wherein said ISDN interface is adapted to receive said subsequent configuration data using one or more communication channels of the or each ISDN line.

98. (Currently Amended) Communication apparatus according to claim 94, wherein said processor is operable to gather information on the use of said at least one service server by said computer system, to process said information to generate summary information and to control

said I/O to periodically transmit said summary information to a ~~provider of said~~ service management system.

99. (Currently Amended) Communication apparatus according to claim 98, including real time clock, wherein said processor is operable to use said real time clock to gather real time information on the use of said at least one service system.

100. (Previously Presented ) Communication apparatus according to claim 98, including user interface to allow a user of said apparatus access to said information.

101. (Previously Presented ) Communication apparatus according to claim 100, wherein said user interface comprises a computer program running on said processor to allow access to said summary information.

102. (Previously Presented ) Communication apparatus according to claim 101, wherein said processor is operable to gather and process said information using machine independent instructions for output to said user.

103. (Previously Presented ) Communication apparatus according to claim 94, including an encoder for encoding said unique identification information before transmission by said I/O.

104. (Previously Presented ) Communication apparatus according to claim 94, including a decoder for decoding configuring received in encoded form by said I/O.

105. (Currently Amended) A configuration system for connection to said communication apparatus according to claim 75 via a communication network, said configuration system comprising:

a third I/O for connection to said communication network, and for receiving said unique identification information from said communication apparatus to enable said communication apparatus to access a service system; and

a configuration processor responsive to said unique identification information to determine initial configuration data for said communication apparatus;

wherein said third I/O is adapted to transmit said determined configuration data to said communication apparatus near said communications network; and

wherein said configuration processor is operative to automatically determine updated configuration data and to cause said third I/O to transmit said updated configuration data to said communication apparatus to enable said communication apparatus to access a service system.

106. (Currently Amended) A configuration system according to claim 105, wherein said configuration processor is operative to determine said configuration data using said unique identification information, information on the user or users of said communication apparatus, and information on the ~~level of~~ service required by the user or users.

107. (Currently Amended) A configuration system according to claim 106, including obtaining means for obtaining said information on the user or users, and said information on the ~~level of~~ service required by the user or users.

108. (Currently Amended) A configuration system according to claim 107, wherein said obtaining means is adapted to obtain said information on the user or users, said information on the ~~level of~~ service required by the user or users, and expected unique identification information prior to receipt of said unique identification information by said third I/O, and said configuration processor is operative to determine said configuration data before receipt of said unique identification information using the information obtained by said obtaining means, to compare the received unique identification information with said expected unique identification, and to cause said third I/O to transmit the configuration data if there is a match in the comparison.

109. (Previously Presented) A configuration system according to claim 108, including means for storing a plurality of sets of said configuration data for a corresponding plurality of said expected unique identification information for a corresponding plurality of said



communication apparatuses, wherein said configuration system can connect to a plurality of said communication apparatuses.

110. (Previously Presented ) A configuration system according to claim 105, wherein said configuration processor is responsive to a request for configuration data received by said third I/O from said communication apparatus to determine configuration data and control said third I/O to transmit said determined configuration data.

111. (Previously Presented ) A configuration system according to claim 105, including a decoder for decoding encoded unique identification information received from said apparatus.

112. (Previously Presented ) A configuration system according to claim 109, including an encoder for encoding said configuration data for transmission to said apparatus.

113. (Canceled) Apparatus for interfacing a computer system to a communication line to access a service, the apparatus comprising:

a first I/O for connection to said computer system;

a second I/O for connection to said communication line;

a processor for gathering information on the use made of said service by said computer system, for processing said information to generate processed information, and for controlling said second I/O to transmit said processed information to a remote management system; and

a storage for storing said information and/or said processed information.

114. (Currently Amended) Apparatus ~~according to claim 113, including~~ for interfacing a computer system to a communication line to access a service, the apparatus comprising:

a first I/O for connection to said computer system;

a second I/O for connection to said communication line;

a clock; and ~~said~~

a processor ~~being~~ responsive to said clock to gather ~~said~~ information on the use made of said service by said computer system with respect to time, to process said information

periodically, to generate summary information, and to cause said second I/O to transmit said ~~processed~~ summary information periodically to said remote management system.

115. (Currently Amended) Apparatus according to claim 114 ~~113~~, including a user interface to allow a user of said apparatus access to said information and/or said ~~processed~~ summary information in said storage..

U 116. (Previously Presented) Apparatus according to claim 115, wherein said user interface comprises a further I/O.

117. (Currently Amended) Apparatus according to claim 115, wherein said user interface comprises a computer program running on said processor to allow a user of said computer system access to said information and/or said ~~processed~~ summary information via said first I/O.

118. (Previously Presented ) Apparatus according to claim 117, wherein said user interface comprises said processor operating as a Web server.

119. (Previously Presented ) Apparatus according to claim 118, wherein said processor is operable to gather and process said information for output to said user using machine independent instructions.

120. (Currently Amended) Apparatus according to claim 114 ~~113~~, wherein said second I/O is adapted to receive configuration data from said management system, and said processor is operative to process said information in accordance with said configuration data.

121. (Canceled) Apparatus for communicating with a remote system over a network to access a service, the apparatus comprising:

an I/O for connection to the network;

a processor for gathering information on the use made of said service by said apparatus, for processing said information to generate processed information, and for controlling said I/O to transmit said processed information to a remote management system; and

a storage for storing said information and/or said processed information.

122. (Currently Amended) Apparatus ~~according to claim 121, including~~ for communicating with a remote system over a network to access a service, the apparatus comprising:

I/O for connection to the network;

a clock; and ~~said~~

a processor being responsive to said clock to gather said information on the use made of said service by said computer system with respect to time, to process said information periodically to generate summary information, and to cause said I/O to transmit said processed summary information periodically to said remote management system.

123. (Currently Amended) Apparatus according claim 122 ~~121~~, including a user interface to allow a user of said apparatus access to said information and/or said ~~processed~~ summary information in said storage.

124. (Currently Amended) Apparatus according to claim 123, wherein said user interface comprises a computer program running on said processor to allow a user access to said information and/or said ~~processed~~ summary information.

125. (Previously Presented) Apparatus according to claim 124, wherein said processor is operable to gather and process said information for output to said user using machine independent instructions.

126. (Previously Presented) Apparatus according to claim 123, wherein said I/O is adapted to receive configuration data from said management system, and said processor is operative to process said information in accordance with said configuration data.

127. (Currently Amended) A method of monitoring communications between a communication apparatus and a remote system over a network to access a service, the method comprising the steps at said communication apparatus, of:

gathering information over a period of time on the use of said service by said communication apparatus;

processing said information periodically to generate ~~processed~~ summary information; and transmitting said ~~processed~~ summary information to a remote management system.

128. (Canceled) A method according to claim 127, wherein said information is gathered with respect to time, processed periodically, and periodically transmitted to said remote management system.

129. (Currently Amended) A method according to claim 127, including the step of supplying said information and/or said ~~processed~~ summary information to a user.

130. (Canceled) Communication apparatus for the performance of communication process over a network comprising:

means for transmitting, in accordance with a first configuration condition of said communication apparatus, unique identification information over said network from said communication apparatus to a remote configuration system for obtaining first reconfiguration data from said remote configuration system;

means for receiving said first reconfiguration data from said remote configuration system and storing said received first reconfiguration data in said communication apparatus;

means for re-configuring said communication apparatus in accordance with said stored first reconfiguration data to place said communication apparatus in a first reconfiguration condition to permit said communication apparatus to perform communication processes over said network in accordance with said first reconfiguration condition; and

means operable on command received from said network for:

receiving second reconfiguration data via said network;

storing said second reconfiguration data in said communication apparatus; and

further reconfiguring said communication apparatus in accordance with said second reconfiguration data to place said communication apparatus in a second reconfiguration condition to permit said communication apparatus to perform communication processes over said network in accordance with said second reconfiguration condition.

131. (Canceled) Communication apparatus for the performance of communication processes over a network, comprising:

means for transmitting, in accordance with a first configuration condition of said communication apparatus, unique identification information over said network from said communication apparatus to a remote configuration system for obtaining first reconfiguration data from said remote configuration system;

means for receiving said first reconfiguration data from said remote configuration system and storing said received first reconfiguration data in said communication apparatus;

means for re-configuring said communication apparatus in accordance with said stored first reconfiguration data to place said communication apparatus in a first reconfiguration condition to permit said communication apparatus to perform communication processes over said network in accordance with said first reconfiguration condition;

means for receiving second reconfiguration data via said network and storing said second reconfiguration data in said communication apparatus, upon command received from said network; and

means for further re-configuring said communication apparatus in accordance with said second reconfiguration data to place said communication apparatus in a second reconfiguration condition to permit said communication apparatus to perform communication processes over said network in accordance with said second reconfiguration condition.

132. (Previously Presented) Server apparatus for communication via a network with a plurality of reconfigurable communication devices, comprising:

means for storing a plurality of different first reconfiguration data relating to different said communication devices;

means responsive to receipt of unique identification data from a said communication device for transmitting to said communication device via said network said first reconfiguration data relating thereto for permitting said communication device to be placed in a first reconfiguration condition defined by said first reconfiguration data; and

means for transmitting to said communication device via said network second reconfiguration data for causing said communication devices to be further reconfigured into second reconfiguration conditions in accordance with said second reconfiguration data, on command of said server apparatus.

133. (Canceled) A process for configuring a communication apparatus for the performance of communication processes over a network, comprising:

transmitting, in accordance with a first configuration condition of said communication apparatus, unique identification information over said network from said communication apparatus to a remote configuration system for obtaining first reconfiguration data from said remote configuration system;

receiving said first reconfiguration data from said remote configuration system and storing said received first reconfiguration data in said communication apparatus;  
re-configuring said communication apparatus in accordance with said stored first reconfiguration data to place said communication apparatus in a first reconfiguration condition to permit said communication apparatus to perform communication processes over said network in accordance with said first reconfiguration condition; and

upon command received from said network:

receiving second reconfiguration data via said network;

storing said second reconfiguration data in said communication apparatus, and further re-configuring said communication apparatus in accordance with said second reconfiguration data to place said communication apparatus in a second reconfiguration condition to permit said communication apparatus to perform communication processes over said network in accordance with said second reconfiguration condition.

134. (Canceled) A process for configuring a communication apparatus for the performance of communication processes over a network, comprising:

transmitting, in accordance with a first configuration condition of said communication apparatus, unique identification information over said network from said communication apparatus to a remote configuration system for obtaining first reconfiguration data from said remote configuration system;

receiving said first reconfiguration data from said remote configuration system and storing said received first reconfiguration data in said communication apparatus;

re-configuring said communication apparatus in accordance with said stored first reconfiguration data to place said communication apparatus in a first reconfiguration condition to permit said communication apparatus to perform communication processes over said network in accordance with said first reconfiguration condition;

receiving second reconfiguration data via said network and storing said second reconfiguration data in said communication apparatus, upon command received from said network; and

further re-configuring said communication apparatus in accordance with said second configuration data to place said communication apparatus in a second reconfiguration condition to permit said communication apparatus to perform communication processes over said network in accordance with said second reconfiguration condition.

135. (Previously Presented) A process for enabling reconfiguration of a plurality of reconfigurable communication devices operable for performing communication operations over a network, comprising:

storing at server means a plurality of different first reconfiguration data relating to different said communication devices;

in response to receipt by the server means of unique identification data from a said communication device transmitting to said communication device via said net work said first reconfiguration data relating thereto for permitting said communication device to be placed in a first reconfiguration condition defined by said first reconfiguration data; and

on command of the server means, transmitting to said communication devices via said network second reconfiguration data for causing said communication devices to be further reconfigured into second reconfiguration conditions in accordance with said second reconfiguration data.

C/